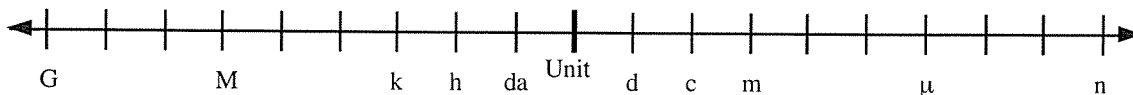


Foundations of Mathematics Grade 11 Formula Sheet

Measurement

Imperial to Imperial	Imperial to SI (Metric)	SI (Metric) to Imperial
1 ft = 12 in	1 in = 2.54 cm	1 cm = 0.3937 in
1 yd = 3 ft	1 ft = 0.3048 m	1 m = 3.2808 ft
1 mi = 5280 ft	1 yd = 0.9144 m	1 m = 1.0936 yds
1 mi = 1760 yds	1 mi = 1.6093 km	1 km = 0.6214 mi



$$SA_{Cylinder} = 2\pi r^2 + 2\pi rh$$

$$SA_{Cone} = \pi r^2 + \pi rs$$

$$SA_{Sphere} = 4\pi r^2$$

$$V_{Cylinder} = \pi r^2 h$$

$$V_{Cone} = \frac{1}{3} \pi r^2 h$$

$$V_{Sphere} = \frac{4}{3} \pi r^3$$

$$V_{Pyramid} = \frac{1}{3} (A_{Base} \times h)$$

$$V_{Prism} = A_{Base} \times h$$

Polygons Sum of the interior angles of an n -sided polygon is $180(n - 2)^\circ$

Linear Relations

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

$$y = mx + b$$

$$y - y_1 = m(x - x_1)$$

$$Ax + By + C = 0$$

Quadratic Functions and Equations

$$y = ax^2 + bx + c$$

$$y = a(x - p)^2 + q$$

$$y = a(x - m)(x - n)$$

Quadratic Formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Trigonometry

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$a^2 = b^2 + c^2 - 2bc \cos A$$

$$\cos A = \frac{b^2 + c^2 - a^2}{2bc}$$

Pythagorean Theorem

$$a^2 = b^2 + c^2$$

Statistics

$$z = \frac{x - \mu}{\sigma}$$

Graphing Calculator

$$x: [x_{\min}, x_{\max}, x_{\text{scl}}]$$

$$y: [y_{\min}, y_{\max}, y_{\text{scl}}]$$